

AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough; and 2. added matter is shown by underlining.

1. (Currently Amended) A length measurement system for measuring relative movements between first and second machine parts (~~21, 28~~), said measurement system comprising a sensing head [(13)] and a rule [(1)] sensed by it, said sensing head [(13)] being securely mountable on the first machine part [(21)] and said rule [(1)] being connectable with the second machine part [(28)] during final assembly of the length measurement system, ~~characterized in that~~ wherein the rule [(1)] is mounted within a profiled part [(2)] which is securely mountable on the second machine part during final assembly and into which the sensing head [(13)] protrudes, said sensing head [(13)] being preadjusted, via a removable mounting element (~~18, 19~~), and being releasably connected with said profiled part [(2)], in a state prepared for final assembly, or said sensing head [(13)], when finally assembled, protruding into the profiled part [(2)] without being supported thereon.

2. (Currently Amended) The length measurement system as claimed in Claim 1, ~~characterized in that~~ wherein the profiled part $[(2)]$ comprises an adhesive surface by which it can be adhered to the second machine part $[(28)]$.

3. (Currently Amended) The length measurement system as claimed in ~~any one of the above Claims, characterized in that~~ Claim 1, wherein the profiled part $[(2)]$ is profiled in a U-shaped manner comprising two legs ~~(8, 9)~~, one of said legs $[(8)]$ being mounted on the second machine part and carrying, at its interior surface, the rule $[(1)]$, and the other of said legs $[(9)]$ embracing the sensing head $[(13)]$ in a non-contacting manner during measurement.

4. (Currently Amended) The length measurement system as claimed in ~~any one of the above Claims, characterized in that~~ Claim 1, wherein in the state prepared for final assembly, the mounting element ~~(18, 19)~~ connects the two legs of the profiled part $[(2)]$ with the sensing head $[(13)]$.

5. (Currently Amended) The length measurement system as claimed in Claim 4, ~~characterized in that~~ wherein the mounting element comprises two spacing members ~~(18, 19)~~ of cylindrical cross-section, which are clamped within grooves ~~(16, 17)~~ of the sensing head $[(13)]$ by means of the profiled part $[(2)]$.

6. (Currently Amended) The length measurement system as claimed in ~~any one of the above Claims, characterized in that~~ Claim 1, wherein the profiled part $[(2)]$ comprises a

reference surface $[(6, 7)]$ aligning the rule $[(1)]$, which reference surface $[(6, 7)]$ is contacted by the rule $[(1)]$ in its mounted state.

7. (Currently Amended) The length measurement system as claimed in Claim 6, ~~characterized by~~ wherein a bracing device (5), ~~which~~ braces the rule $[(1)]$ in a direction toward the reference surface $[(6, 7)]$.

8. (Currently Amended) The length measurement system as claimed in ~~any one of the above Claims, characterized in that,~~ Claim 1, wherein during measurement, the sensing head $[(13)]$ protruding into the profiled part $[(2)]$ embraces the rule $[(1)]$ mounted thereon in a trilateral and non-contacting manner.

9. (Currently Amended) A method of final assembly of a length measurement system as claimed in Claim 1, ~~wherein,~~ comprising the steps of:

for final assembly, the profiled part $[(2)]$ is aligned with and mounted on the second machine part $[(28)]$,

the sensing head $[(13)]$ is securely mounted on the first machine part $[(21)]$ in a gap-filling manner $[(31)]$, and

$[[\text{then}]]$ the mounting element (18, 19) is removed so as to release the connection between the profiled part and the sensing head.

10. (Currently Amended) The method as claimed in Claim 9, ~~wherein~~ further comprising the steps that the profiled part [(2)] is roughly aligned with a longitudinal axis of the relative movement and is then adjusted, by means of a gauge, along said longitudinal axis, at a constant distance [(D)] from the first machine part [(21)], the first and second machine parts (21, 28) being moved relative to each other so as to adjust the constant distance.

11. (Currently Amended) The method as claimed in Claim 10, ~~wherein~~ further comprising the steps that a distance [(D)] is adjusted using the gauge, said distance [(D)] resulting in a predetermined gap between the first machine part [(21)] and the sensing head [(13)] prior to mounting the sensing head [(13)] on the first machine part [(28)].

12. (Currently Amended) The method as claimed in ~~any one of Claims 9 to 11,~~ wherein Claim 9, further comprising the step that at least one of the sensing head [(13)] and[/or] the profiled part [(2)] is[/are] adhered to the respective machine part (21, 28).

Please add new claims 13-14 as follows:

13. (New) A method of final assembly of a length measurement system, the length measurement system for measuring relative movements between first and second machine parts, said measurement system comprising a sensing head and a rule sensed by it, said sensing head being securely mountable on the first machine part and said rule being connectable with the second machine part during final assembly of the length measurement system, the method comprising the steps of:

mounting the rule within a profiled part which is securely mountable on the second machine part during final assembly and into which the sensing head protrudes,

preadjusting the sensing head via a removable mounting element, and releasably connecting the sensing head with said profiled part, in a state prepared for final assembly.

14. (New) A method of final assembly of a length measurement system, the length measurement system for measuring relative movements between first and second machine parts, said measurement system comprising a sensing head and a rule sensed by it, said sensing head being securely mountable on the first machine part and said rule being connectable with the second machine part during final assembly of the length measurement system, the method comprising the steps of:

mounting the rule within a profiled part which is securely mountable on the second machine part during final assembly and into which the sensing head protrudes,

preadjusting the sensing head wherein when finally assembled, the sensing head protrudes into the profiled part without being supported thereon.